

# CONFERENCE PROGRAM

## Sunday, September 24

6:00 p.m.-8:00 p.m.

### OPENING KEYNOTE SESSION

Promenade East IV-VI

**Session Chairs: Cory Abate-Shen**, Columbia University Medical Center, Herbert Irving Comprehensive Cancer Center, New York, NY, and **Kevin M. Haigis**, Beth Israel Deaconess Medical Center, Boston, MA

6:00 p.m.-6:10 p.m.

### Welcome Remarks

Cory Abate-Shen

6:10 p.m.-7:00 p.m.

### Engineering the cancer genome

Tyler Jacks, David H. Koch Institute for Integrative Cancer Research at MIT, Cambridge, MA

7:00 p.m.-7:50 p.m.

### Unearthing mechanisms of malignant progression and resistance of cancer stem cells

Elaine Fuchs, The Rockefeller University, New York, NY

8:00 p.m.-10:00 p.m.

### OPENING RECEPTION

Promenade West I-III

## Monday, September 25

7:30 a.m.-8:30 a.m.

### CONTINENTAL BREAKFAST / NETWORKING ROUNDTABLES

Promenade Foyer and St. James Hall and Patio and Porte Cochere

8:30 a.m.-10:30 a.m.

### PLENARY SESSION 1: TECHNOLOGICAL ADVANCES FOR MODELING CANCER IN MICE

Promenade East IV-VI

**Session Chair: Julien Sage**, Stanford University School of Medicine, Stanford, CA

8:30 a.m.-9:00 a.m.

### Cancer modeling in the CRISPR age

Andrea Ventura, Memorial Sloan Kettering Cancer Center, New York, NY

9:00 a.m.-9:15 a.m.

### Modeling colorectal cancer in vivo through CRISPR-based genome editing\*

Lukas E. Dow, Weill Cornell Medical College, New York, NY

9:15 a.m.-9:45 a.m.

### Quantitative and multiplex analysis of the genomic determinants of tumorigenesis

Monte Winslow, Stanford University School of Medicine, Stanford, CA

9:45 a.m.-10:00 a.m.

### Capturing the integration of Ras-mutant cells into normal epithelial tissue using live imaging\*

Cristiana M. Pineda, Yale University, New Haven, CT

10:00 a.m.-10:30 a.m.

### Genetic dissection of cancer development, therapy response, and resistance in mouse models of breast cancer

Jos Jonkers, Netherlands Cancer Institute, Amsterdam, The Netherlands

*\*short talks from proffered abstracts*

# CONFERENCE PROGRAM

- 10:30 a.m.-11:00 a.m.**                    **BREAK**  
Promenade Foyer
- 11:00 a.m.-1:00 p.m.**                    **PLENARY SESSION 2:**  
**ELUCIDATING CANCER MECHANISMS USING MOUSE MODELS**  
Promenade East IV-VI  
**Session Chair: Karen M. Cichowski**, Brigham & Women's Hospital, Boston, MA
- 11:00 a.m.-11:30 a.m.                    **Driver mutations and cell-of-origin as critical factors determining the phenotypic characteristics of thoracic tumor subtypes**  
Anton J.M. Berns, Netherlands Cancer Institute, Amsterdam, The Netherlands
- 11:30 a.m.-11:45 a.m.                    **The tumor suppressor BAP1 regulates the Hippo pathway in pancreatic ductal adenocarcinoma\***  
Anwasha Dey, Genentech Inc., South San Francisco, CA
- 11:45 a.m.-12:15 p.m.                    **Deconstructing p53 pathways in tumor suppression**  
Laura D. Attardi, Stanford University School of Medicine, Stanford, CA
- 12:15 p.m.-12:30 p.m.                    **p120 catenin loss drives pancreatic cancer EMT and metastasis through activation of calcium signaling\***  
Jason R. Pitarresi, University of Pennsylvania, Philadelphia, PA
- 12:30 p.m.-1:00 p.m.                    **Somatic p53 mutations drive development of triple-negative breast cancer with evolutionarily distinct metastases**  
Guillermina Lozano, The University of Texas MD Anderson Cancer Center, Houston, TX
- 1:00 p.m.-1:15 p.m.**                    **POSTER SESSION A HIGHLIGHTS**  
Promenade East IV-VI
- (A01) Somatic engineering of the mammary gland for the development of novel mouse models of triple-negative breast cancer**  
Stefano Annunziato, Netherlands Cancer Institute, Amsterdam, The Netherlands
- (A02) Potent synergism between FBXW7 and PI3K signaling in a mouse model of endometrial carcinogenesis**  
Ileana C. Cuevas, UT Southwestern Medical Center, Dallas, TX
- (A03) Perturbation of proteostasis is lethal in SMARCB1-deficient tumors**  
Giannicola Genovese, The University of Texas MD Anderson Cancer Center, Houston, TX
- (A04) Cross-species oncogenomics approach identifies PTPN11 as an oncogene and potential therapeutic target in melanoma**  
Minjung Kim, Moffitt Cancer Center, Tampa, FL
- (A05) Investigating mechanisms of obesity-mediated pancreatic cancer progression**  
Mandar Deepak Muzumdar, Koch Institute at MIT, Cambridge, MA
- 1:15 p.m.-3:30 p.m.**                    **POSTER SESSION A / LUNCH**  
Promenade West I-III

*\*short talks from proffered abstracts*

# CONFERENCE PROGRAM

- 4:00 p.m.-6:00 p.m.**      **PLENARY SESSION 3: MODELING THE TUMOR MICROENVIRONMENT**  
Promenade East IV-VI  
**Session Chair: Kwok-Kin Wong**, New York University (NYU) Langone Medical Center, New York, NY
- 4:00 p.m.-4:30 p.m.      **Metabolic recycling in cancer**  
Marcia Haigis, Harvard Medical School, Boston, MA
- 4:30 p.m.-4:45 p.m.      **Lineage specifiers SOX2 and NKX2-1 inversely regulate lung tumor immune microenvironment\***  
Trudy G. Oliver, University of Utah, Salt Lake City, UT
- 4:45 p.m.-5:15 p.m.      **Evaluation of the microenvironment in antitumor immune responses**  
Marcus W. Bosenberg, Yale University School of Medicine, New Haven, CT
- 5:15 p.m.-5:30 p.m.      **Contribution of mutant microenvironment to hereditary cancer: Single-cell gene expression profiling of a genetically engineered mouse model of human hereditary BRCA1-related breast cancer\***  
Carman M. Li, Harvard Medical School, Boston, MA
- 5:30 p.m.-6:00 p.m.      **Tumor microenvironment: Stroma-tumor cell signaling defined by a cross-species approach**  
Gustavo W. Leone, Medical University of South Carolina Hollings Cancer Center, Charleston, SC

## Tuesday, September 26

- 7:30 a.m.-8:30 a.m.**      **CONTINENTAL BREAKFAST / NETWORKING ROUNDTABLES**  
Promenade Foyer and St. James Hall and Patio and Porte Cochere
- 8:30 a.m.-10:30 a.m.**      **PLENARY SESSION 4:  
STEM CELLS AND DEVELOPMENTAL PATHWAYS IN CANCER**  
Promenade East IV-VI  
**Session Chair: Michael M. Shen**, Columbia University College of Physicians & Surgeons, New York, NY
- 8:30 a.m.-9:00 a.m.      **Intra- and intertumoral heterogeneity and response to therapy in mouse models of SCLC**  
Julien Sage, Stanford University School of Medicine, Stanford, CA
- 9:00 a.m.-9:15 a.m.      **Elucidating mechanisms of p53-deficient breast cancer development via lineage tracing and clonal analysis\***  
Zhe Li, Brigham & Women's Hospital and Harvard Medical School, Boston, MA
- 9:15 a.m.-9:45 a.m.      **Imaging stem cell signals in cancer heterogeneity and therapy resistance**  
Tannishtha Reya, University of California San Diego, La Jolla, CA

*\*short talks from proffered abstracts*

# CONFERENCE PROGRAM

- 9:45 a.m.-10:00 a.m. **Altered nucleolar trafficking of the Bln helicase in the mouse reduces size, increases DNA damage and tumor susceptibility, and facilitates premature aging\***  
Joanna L. Groden, The Ohio State University College of Medicine, Columbus, OH
- 10:00 a.m.-10:30 a.m. **Lessons from modeling neural tumors in mice**  
Luis F. Parada, Memorial Sloan Kettering Cancer Center, New York, NY
- 10:30 a.m.-11:00 a.m. BREAK**  
Promenade Foyer
- 11:00 a.m.-1:00 p.m. PLENARY SESSION 5: GENETICS, GENOMICS, AND SYSTEMS BIOLOGY**  
Promenade East IV-VI  
**Session Chair: Monte M. Winslow**, Stanford University School of Medicine, Stanford, CA
- 11:00 a.m.-11:30 a.m. **Normal and cancer stem cells in multistage carcinogenesis**  
Allan Balmain, UCSF Helen Diller Family Comprehensive Cancer Center, San Francisco, CA
- 11:30 a.m.-11:45 a.m. **Clonal dynamics during breast cancer dormancy and recurrence\***  
James V. Alvarez, Duke University, Durham, NC
- 11:45 a.m.-12:15 p.m. **The global proteome and phospho-proteome of K-Ras mutant tissues**  
Kevin M. Haigis, Beth Israel Deaconess Medical Center, Boston, MA
- 12:15 p.m.-12:30 p.m. **RNA sequencing-based analysis of transposon-induced tumors reveals novel insights into disease pathogenesis\***  
David A. Largaespada, University of Minnesota, Minneapolis, MN
- 12:30 p.m.-1:00 p.m. **Of mice and men: Using systems biology approaches to study human cancer**  
Cory Abate-Shen, Columbia University Medical Center, Herbert Irving Comprehensive Cancer Center, New York, NY
- 1:00 p.m.-2:30 p.m. LUNCH ON OWN**
- 2:30 p.m.-4:15 p.m. PLENARY SESSION 6:  
BEYOND GENETICALLY ENGINEERED MOUSE MODELS**  
Promenade East IV-VI  
**Session Chair: Guillermina Lozano**, The University of Texas MD Anderson Cancer Center, Houston, TX
- 2:30 p.m.-3:00 p.m. **GEMMs and GEOs to characterize pancreatic cancer initiation and progression**  
David A. Tuveson, Cold Spring Harbor Laboratory Cancer Center, Cold Spring Harbor, NY
- 3:00 p.m.-3:30 p.m. **Organoid models of bladder cancer**  
Michael M. Shen, Columbia University College of Physicians & Surgeons, New York, NY
- 3:30 p.m.-3:45 p.m. **Investigating lung cancer cells-of-origin using three-dimensional organoid cultures\***  
Christine Fillmore Brainson, University of Kentucky, Lexington, KY
- 3:45 p.m.-4:15 p.m. **The tumor immune landscape and heterogeneity projects**  
Pier Paolo Pandolfi, Beth Israel Deaconess Medical Center, Boston, MA

*\*short talks from proffered abstracts*

# CONFERENCE PROGRAM

**4:15 p.m.-4:45 p.m.**

**BREAK**

Promenade Foyer

**4:45 p.m.-5:40 p.m.**

**KEYNOTE ADDRESS**

Promenade East IV-VI

**Session Chair: Katerina A. Politi**, Yale Cancer Center, New Haven, CT

**Interrogating cancer drivers and dependencies using non-germline mouse models**

Scott W. Lowe, Memorial Sloan Kettering Cancer Center, New York, NY

**5:40 p.m.-5:55 p.m.**

**POSTER SESSION B HIGHLIGHTS**

Promenade East IV-VII

**(B01) A genetically engineered mouse model of de novo bone metastasis**

Juan Martin Arriaga, Columbia University Medical Center, New York, NY

**(B02) Neutrophils and Snail orchestrate the establishment of a pro-tumor microenvironment in lung adenocarcinoma**

Etienne Meylan, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland

**(B03) Acinar cell expansion: A new step in pancreatic tumorigenesis**

Patrick Neuhofer, Stanford University, Stanford, CA

**(B04) Activating K-RasA146T mutations induce Mapk-dependent hyperproliferation in the intestinal epithelium**

Emily Poulin, Beth Israel Deaconess Medical Center, Boston, MA

**(B05) BRAF inhibition and cytokine therapy for melanoma: A novel rational combined approach**

Gabriele Romano, The University of Texas MD Anderson Cancer Center, Houston, TX

**(B06) A SOX9<sup>+</sup> bile duct progenitor as a cell of origin of hepatocellular carcinoma**

Patrick Viatour, Children's Hospital of Philadelphia, Philadelphia, PA

**6:00 p.m.-8:30 p.m.**

**POSTER SESSION B/RECEPTION**

Promenade West I-III

## Wednesday, September 27

**7:30 a.m.-8:15 a.m.**

**CONTINENTAL BREAKFAST / NETWORKING ROUNDTABLES**

Promenade Foyer and St. James Hall and Patio and Porte Cochere

**8:15 a.m.-9:45 a.m.**

**PLENARY SESSION 7: TARGETING THE TUMOR MICROENVIRONMENT**

Promenade East IV-VI

**Session Chair: Martin McMahon**, University of Utah Huntsman Cancer Institute, Salt Lake City, UT

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8:15 a.m.-8:30 a.m.	<b>Lung cancer mouse models for preclinical testing of novel and immune therapies</b> Kwok-Kin Wong, New York University (NYU) Langone Medical Center, New York, NY
8:30 a.m.-9:00 a.m.	<b>The immune microenvironment in lung cancer: Lessons from mouse models</b> Katerina A. Politi, Yale Cancer Center, New Haven, CT
9:00 a.m.-9:30 a.m.	<b>Targeting the drug- and immune-privileged sanctuary of pancreas cancer</b> Sunil R. Hingorani, Fred Hutchinson Cancer Research Center, Seattle, WA
9:30 a.m.-9:45 a.m.	<b>Selective lethality of cisplatin in pancreatic cancer is dependent on mitotic functions of BRCA2*</b> Kenneth P. Olive, Columbia University Medical Center, New York, NY
<b>9:45 a.m.-10:15 a.m.</b>	<b>BREAK</b> Promenade Foyer
<b>10:15 a.m.-12:15 p.m.</b>	<b>PLENARY SESSION 8: USING MOUSE MODELS TO STUDY DRUG RESISTANCE</b> Promenade East IV-VI <b>Session Chair: Marcus W. Bosenberg</b> , Yale University School of Medicine, New Haven, CT
10:15 a.m.-10:45 a.m.	<b>Using mouse models to improve cancer therapy</b> Michael T. Hemann, David H. Koch Institute for Integrative Cancer Research at MIT, Boston, MA
10:45 a.m.-11:15 a.m.	<b>In vivo screens assessing drug response and resistance in acute leukemias characterized by hyperactive Ras signaling</b> Kevin M. Shannon, University of California San Francisco, San Francisco, CA
11:15 a.m.-11:45 a.m.	<b>Mutational activation of PI3-kinase-<math>\alpha</math> promotes dedifferentiation of BRAF<sup>V600E</sup>-driven lung tumor cells</b> Martin McMahon, University of Utah Huntsman Cancer Institute, Salt Lake City, UT
11:45 a.m.-12:15 p.m.	<b>Using mouse models to develop therapies for Ras-driven cancers</b> Karen M. Cichowski, Brigham & Women's Hospital, Boston, MA
<b>12:15 p.m.-1:00 p.m.</b>	<b>MEETING SUMMARY</b> Promenade East IV-VI <b>Closing Remarks</b> Julien Sage, Stanford University School of Medicine, Stanford, CA
<b>1:00 p.m.</b>	<b>DEPARTURE</b>

*\*short talks from proffered abstracts*